

CLAIMS:

1. Recordable optical record carrier comprising:
 - a first transparent substrate layer (1),
 - a first semi-transparent recordable information layer (2) including an organic dye material having a high data storage capacity,
 - 5 - a second transparent substrate layer (4),
 - a second recordable information layer (5) including an organic dye material having a lower data storage capacity than said first information layer (2), and
 - a cover layer (6).
- 10 2. Record carrier as claimed in claim 1, wherein said first information layer (2) is an information layer as used as L0 layer in a dual-layer DVD+R disc.
3. Record carrier as claimed in claim 1 or 2, wherein said first information layer (2) has a first complex refractive index $\tilde{n}_{\lambda 1} = n_{\lambda 1} - i k_{\lambda 1}$ at a first wavelength λ_1 and a second
 - 15 complex refractive index $\tilde{n}_{\lambda 2} = n_{\lambda 2} - i k_{\lambda 2}$ at a second wavelength λ_2 , a thickness d , an optical reflection value R_1 at said first wavelength λ_1 and an optical transmission value T_2 at said second wavelength λ_2 , wherein the following conditions are fulfilled: $T_2 \geq 0.76$, $R_1 \geq 0.15$, $n_1 \geq 2.0$, $k_1 < 0.3$, $k_2 < 0.1$ and d is in the range of $\lambda_1/8n_1 \leq d \leq 5\lambda_1/8n_1$, λ_1 being the
 - 20 wavelength of a radiation beam used for recording information in the first information layer (2) and λ_2 being the wavelength of a radiation beam used for recording information in said second information layer (5).
4. Record carrier as claimed in claim 1, wherein said first substrate layer (1) comprises a guide groove having a depth g , the guide groove being present at the side of the
 - 25 substrate layer adjacent said first information layer and wherein said first information layer (2) has a complex refractive index $\tilde{n} = n - i k$ at a wavelength λ of a radiation beam used for recording information, a thickness d_{RG} in the groove portion and a thickness d_{RL} in the

portion between the grooves, said groove depth g being in the range $(\lambda/650)*50 \text{ nm} < g < (\lambda/650)*180 \text{ nm}$ with λ expressed in nm.

5. Record carrier as claimed in claim 4, wherein the thickness d_{RG} of said first
5 information layer (2) fulfils the condition $145 \text{ nm} \leq d_{RG} \cdot n < 245 \text{ nm}$.
6. Record carrier as claimed in claim 3 or 4, wherein the first wavelength λ_1 is
approximately 650 nm and the second wavelength λ_2 is approximately 780 nm.
- 10 7. Record carrier as claimed in claim 1, wherein said second information layer
(5) is an information layer as used in a CD-R disc.
8. Record carrier as claimed in claim 1, wherein said first and said second
substrate layers (2, 5) have a thickness in the range of 0.55 to 0.65 mm, in particular of
15 substantially 0.6 mm.
9. Record carrier as claimed in claim 1, further comprising an additional semi-
transparent reflector layer (7) between said first information layer (2) and said second
substrate layer (4), in particular a dielectric mirror layer made of SiO_2 or SiC or a metallic
20 mirror layer made of Ag.